

## 3.0 CERCLA SITE CLOSEOUT PROCESS

---

This section of the guide addresses the CERCLA requirements and should be used by the restoration project team to plan and tailor their site closeout efforts and to facilitate the environmental site closeout process at their installation. This is not intended to be a prescriptive document that must be followed explicitly. The CERCLA guidance and information described in this section provide the DoD Component RPM/BEC a flexible management tool that can be applied to the specific situations at each installation.

Users of this section should recognize that in most cases only a portion of these requirements would apply at a particular installation. Restoration project team members should discuss the most effective manner of integrating and applying these requirements at their installation. A set of tools, information, and considerations with which to develop a site closeout strategy for an installation is presented. Not every installation will require all the tools.

The closeout of sites under CERCLA follows the process defined in the implementing regulations (the National Oil and Hazardous Substances Pollution Contingency Plan [NCP] [40 CFR 300]) and related EPA guidance. Major milestones, phases, and documentation requirements for this process are identified in Figure 3.0 and Tables 3.0-1, 3.0-2, and 3.0-3.

Table 3.0-1 presents a comparison of DoD and CERCLA/Superfund phase and milestone terminology. It should be noted that certain other commonly used EPA/Superfund fund-lead terms (e.g., operational and functional and long-term remedial action) are not readily comparable to DoD terminology and are not necessarily applicable for a Federal facility; for this reason they have been omitted from Table 3.0-1.

Table 3.0-2 presents typical contents for site closeout documentation during major phases and milestones of the process. Restoration project teams are encouraged to use this table to tailor the contents and determine the applicability of documentation to their installation. This is an area where, by working together up front, teams can streamline and consolidate their documentation effort, as illustrated by the commonality of document components shown in Table 3.0-2. Restoration project teams must document their efforts in a manner similar to the CERCLA process, whether or not their installation is on the NPL, in order to show consistency with the NCP.

Table 3.0-3 lists in greater detail the various forms and purposes of site closeout documentation, including documents beyond those presented in Table 3.0-2.

Site restoration under CERCLA also entails two additional requirements not explicitly addressed under RCRA: Five-Year Reviews of remedy protectiveness and deletion of NPL installations from the NPL. These requirements are addressed in Sections 3.8 and 3.9, respectively.

In the following subsections, figures and accompanying tables describe an overall framework for closeout of sites under CERCLA. The figures in the following subsections are all consolidated into a single foldout flowchart at the end of this section. The information is a compilation of existing laws, regulations, policies, and guidance, and assigns responsibilities for each task to a **Lead** (the person/organization primarily responsible for task execution) and **Coordination/Concurrence** (the person(s)/organization(s) that must assist in, coordinate on, review, concur with, and/or approve task execution). For NPL sites, these coordination/concurrence roles are generally well-defined; at non-NPL sites, the respective roles of EPA and the state may require further definition. In the accompanying flow charts, task boxes with the □ shape indicate tasks that are primarily documentation requirements.

Figure 3.0. General Environmental Site Closeout Process (CERCLA)

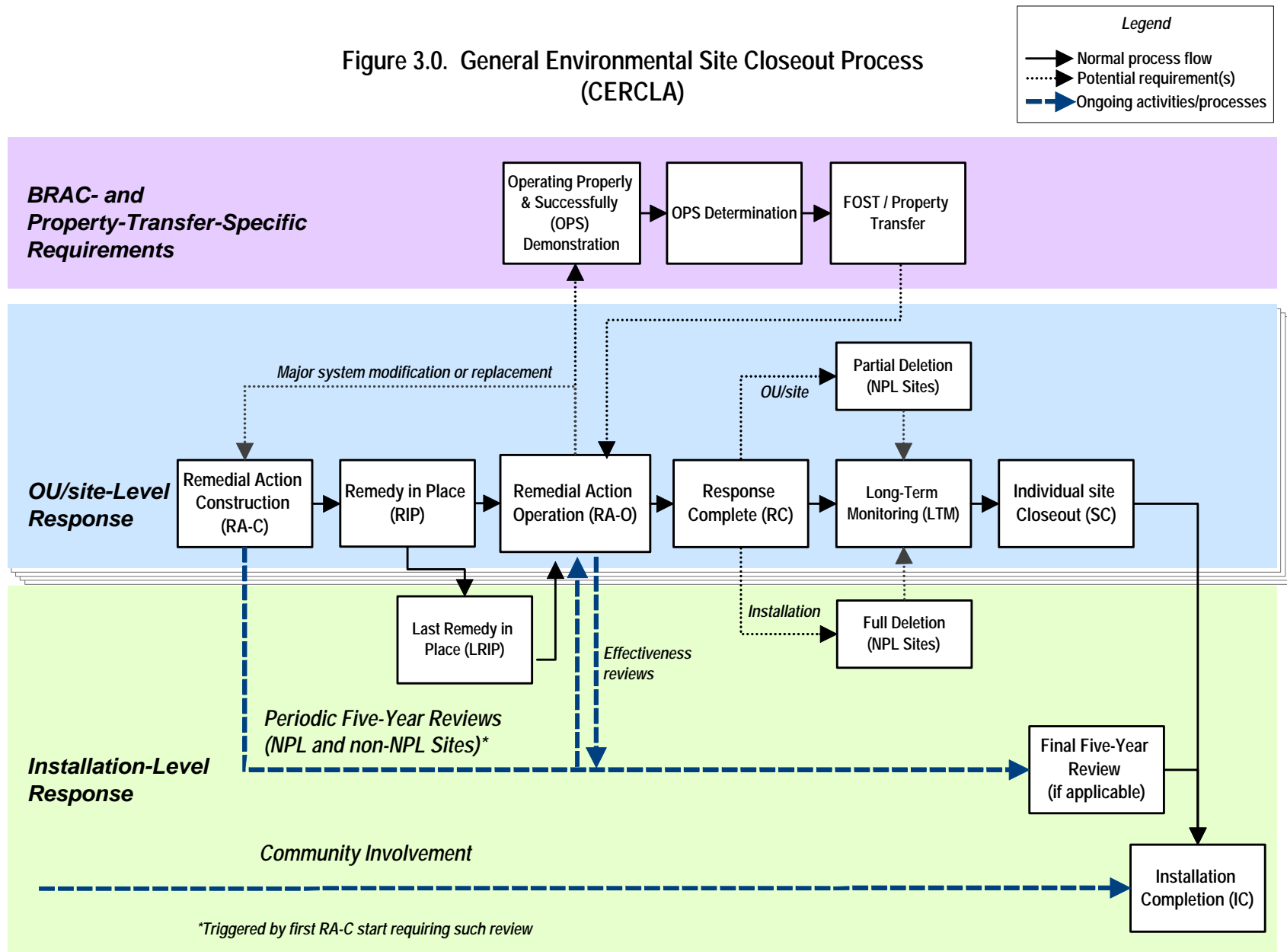


TABLE 3.0-1 COMPARISON OF DoD AND CERCLA/SUPERFUND PHASE AND MILESTONE TERMINOLOGY

DoD Phases/Milestones	CERCLA/Superfund Phases/Milestones
Site Discovery	Site Discovery
Preliminary Assessment/Site Investigation	Preliminary Assessment/Site Investigation
Remedial Investigation	Remedial Investigation
Feasibility Study	Feasibility Study
Record of Decision	Record of Decision
Remedial Design	Remedial Design
Remedial Action Construction (RA-C)*	Remedial Action Start through Completion
Remedy in Place (RIP)*	Remedial Action Completion
Last Remedy in Place (LRIP)*	NPL Site Construction Completion/ Preliminary Close Out Report [all Operable Units/Entire Installation]
Remedial Action – Operation (RA-O)*	Remedial Action (RA) or Operation & Maintenance (O&M) [depending on remedy]
Response Complete*	Final RA Report [individual sites/OU's] or NPL Site Completion/Final Close Out Report [all Operable Units/Entire Installation]
	NPL Deletion
Long-Term Monitoring (LTM)*	Operation and Maintenance**
Site Closeout*	None

\*Milestones/phases used in this guide

\*\*Will continue beyond NPL deletion

TABLE 3.0-2 DOCUMENTATION CONTENTS FOR CERCLA SITE CLOSEOUT

Contents	Remedy Placement (RIP <sup>(1)</sup> )		Remedy Performance (RA-O <sup>(2)</sup> , RC <sup>(1)</sup> )			Remedy Protectiveness (LTM <sup>(2)</sup> , SC <sup>(1)</sup> )
	Site/OU level	Installation Level	Site/OU Level		Installation Level	Installation Level
	Interim RA Report	Preliminary Closeout Report (PCOR)	OPS Demonstration	RA Report	Final Closeout Report (FCOR)	Five-Year Review Report
Introduction	✓	✓	✓	✓	✓	✓
Summary of Site Conditions	✓	✓	✓		✓	✓
Chronology of Events	✓			✓		
Performance Standards and Construction Quality Control	✓			✓		
Construction Activities	✓		✓	✓		
Certification that Remedy is Functioning Properly	✓			✓		
Demonstration of Cleanup Activity QA/QC		✓			✓	
Monitoring Results	✓	✓		✓	✓	✓
Operation and Maintenance Plan	✓	✓	✓	✓	✓	
Schedule for Site Completion	✓	✓	✓			✓
Confirmation Sampling for Attainment of Cleanup Objectives					✓	✓
Final Remedy Inspection and Results				✓	✓	
Analysis of Protectiveness					✓	✓
Five-Year Review Schedule		✓			✓	
Summary of Costs	✓	✓	✓	✓	✓	✓

(1) Signifies that this is a Milestone

(2) Signifies that this is a Phase

**Table 3.0-3 Summary of CERCLA Site Closeout Documentation Requirements\***

Document	Also RCRA Requirement	Applicability			Purpose/Function
		Site	OU	Inst.	
Remedy Decision					
No Action Record of Decision (ROD) or equivalent decision document		✓	✓		Results when the lead agency (DoD Component) determines that no remedial action is necessary
ROD (or equivalent decision document) with Remedial Action		✓	✓		Documents remedy to be taken at sites requiring action.
Public Notice of Availability of ROD		✓	✓		Required under the NCP when a ROD is signed and issued
No Further Response Action Planned (NFRAP) or equivalent decision document		✓	✓		NFRAP is a decision document that indicates that no further remedial action is considered necessary at a site.
Remedy in Place (RIP)					
Interim RA Report		✓	✓		For long-term groundwater and surface water remedies, documents that physical construction is complete and unit is operating as designed. Only applicable when attainment of cleanup goals will take a long time.
Preliminary Close Out Report (PCOR)				✓	Demonstrates and documents that physical construction at all sites/OUs at an installation has been completed.
Remedial Action Operation (RA-O)					
Remedial Action Operation Plan		✓	✓		A general plan for the conduct of a response action, addressing RA operations and maintenance, health and safety, performance and environmental monitoring
Progress/Performance Report(s)		✓	✓		Documents that the remedial action is performing properly and in accordance with the ROD
Public Notice/Comment for Remedy Alterations	✓	✓	✓		When a remedy must be altered because cleanup goals are not being achieved (e.g., through a ROD amendment or modified corrective action plan), public notice/ comment is generally required
Five-Year Review(s)					
Five-Year Review Report				✓	Documents scope and nature of the review, results, actions taken or proposed, and scope and nature of future reviews
Operating Properly and Successfully (OPS) Demonstration					
OPS Demonstration and Approval Letter		✓	✓		Only applicable in cases where property is being transferred. Indicates that the remedy has been demonstrated to EPA to be operating properly and successfully.
Finding of Suitability to Transfer (FOST)		✓	✓		Documents that property is suitable for deed transfer under CERCLA
Public Notice of FOST		✓	✓		Notifies the public that a FOST has been signed/issued
Response Complete (RC)					
Remedial Action (RA) Report		✓	✓		Documents that cleanup activities have taken place at a single OU/site and that ROD cleanup standards have been met
Long-Term Monitoring Plan	✓	✓	✓		A general plan indicating how a successful RA will continue to be monitored to ensure that the remedy remains effective
Final Close Out Report (FCOR)				✓	Documents compliance with statutory requirements and provides a consolidated record of all remedial activities for all OUs at an installation
NPL Deletion					
Letter of state Concurrence		✓	✓	✓	Indicates that state concurs with EPA's intent to delete site from the NPL; deletion cannot occur without state concurrence
[Partial or Full] Deletion Docket		✓	✓	✓	Contains all pertinent information supporting the deletion recommendation
[Partial or Full] Notice of Intent to Delete (NOID)		✓	✓	✓	Informs the public of EPA's intent to delete all or a portion of an installation from the NPL; published in the <i>Federal Register</i>
Responsiveness Summary		✓	✓	✓	Presents comments received during the public comment period with detailed responses to the comments
Notice of [Partial or Full] Deletion		✓	✓	✓	States that all responses under CERCLA have been implemented and that no further response is appropriate for all or a portion of an installation
Site Closeout (SC)					
Federal Facilities Agreement termination	✓			✓	Documents that restoration of an NPL installation is complete and terms of the FFA have been met

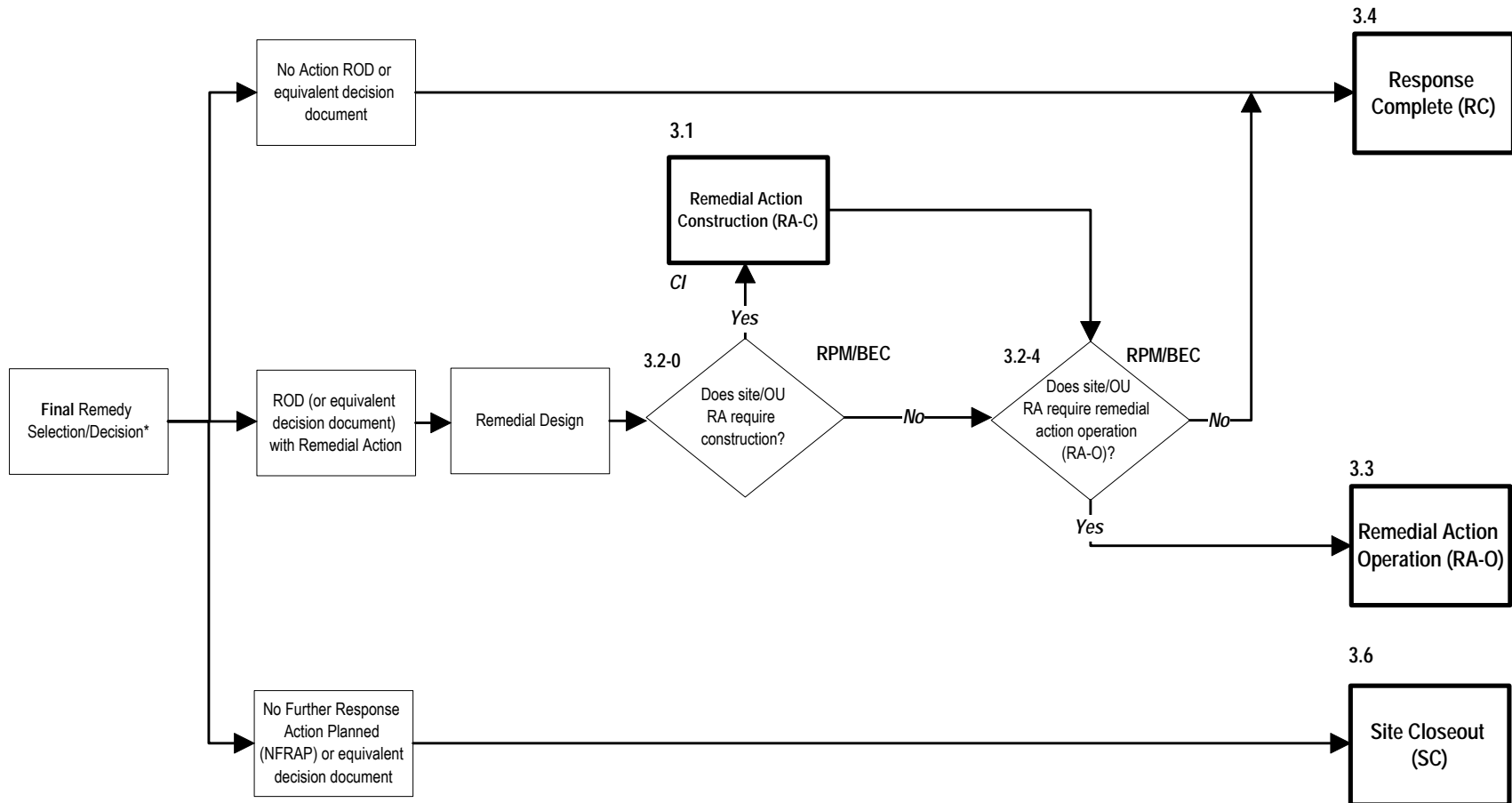
\* A list of example documents are tabulated in Section 9, many of which can be obtained on the Environmental Site Closeout website, <http://www.afbca.hq.af.mil/closeout>.

### 3.1 REMEDIAL ACTION CONSTRUCTION (RA-C)

---

Much guidance has already been prepared to address the initial steps of the environmental site closeout process, including Remedial Action Construction. As a result, Table 3.1 only includes task guidance and information for community involvement at a high level. Readers can refer to other sources for additional guidance and information on RA-C. Subsequent steps of the Site Closeout Process are discussed in greater detail in later sections.

Figure 3.1. Remedial Action Construction (CERCLA)



CI denotes Community Involvement

\*EE/CAs, IRAs, Removal Actions require final decision document

**TABLE 3.1 REMEDIAL ACTION CONSTRUCTION (CERCLA)**

*This Table accompanies Figure 3.1, Remedial Action Construction (CERCLA)*

TASK NUMBER	TASK NAME	LEAD	COORD./ CONCUR	TASK GUIDANCE AND INFORMATION
	<b>REMEDIAL ACTION CONSTRUCTION (CERCLA)</b>			
	Final Remedy Selection/Decision	RPM/BEC		<input type="checkbox"/> Interim Remedial Actions (IRAs), or previous Engineering Evaluations/Cost Analyses (EE/CAs) and Removal Actions, require a final decision document if they are intended to serve as the final remedy for a site/OU. The overall site closeout process refers to the final remedy for a site; site closeout cannot be accomplished until the final remedy has been identified and selected.
	No Action Record of Decision (ROD) or equivalent decision document	RPM/BEC		<input type="checkbox"/> Typically issued at site/OU level when existing conditions do not warrant further remedial action. May document that previously conducted removal actions or interim remedial actions were sufficient to protect human health and the environment.
	ROD (or equivalent decision document) with Remedial Action	RPM/BEC		<input type="checkbox"/> Documents planned remedial activities at site/OU level or across an entire installation.
	No Further Response Action Planned (NFRAP) or equivalent decision document	RPM/BEC		<input type="checkbox"/> NFRAP is an Air Force decision document. In general, a NFRAP document indicates no further action is required at a site/OU or for an entire installation. In the context of Figure 3.1, the NFRAP documents that the final remedy requires no action; i.e., no additional remedial action is planned across the entire installation.
	Remedial Design	RPM/BEC		<input type="checkbox"/> In general, a selected remedy that requires some form of remedial action will also require a remedial design phase. In the case of simple excavation, the RD phase may consist of developing the plan for executing the excavation. For more complex, long-term remedies such as groundwater pump-and-treat, the RD phase will be more substantial.
3.1	Remedial Action Construction (RA-C)			<p><b>Community Involvement</b></p> <p><i>Required</i></p> <input type="checkbox"/> At completion of engineering design, produce and distribute updated Fact Sheet on Final Engineering Design. <input type="checkbox"/> Conduct public briefing on Final Engineering Design (as appropriate). <input type="checkbox"/> <i>For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.</i>

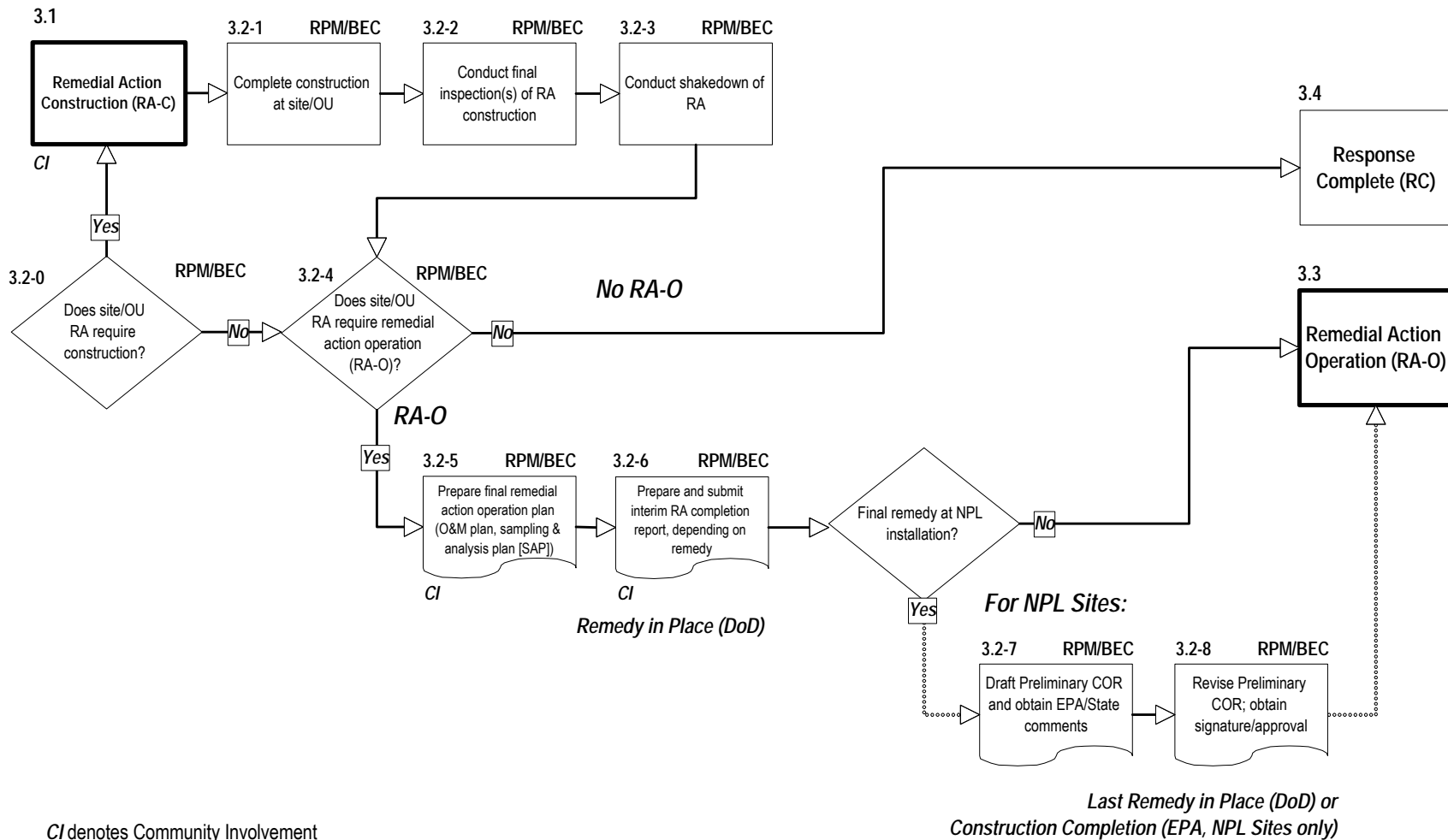
## 3.2 Documentation of Remedy in Place

The process for Documentation of Remedy in Place is graphically shown in Figure 3.2 with accompanying task guidance and information in Table 3.2.



Figure 3.2. Documentation of Remedy in Place (CERCLA)

(Must be done for each individual site/OU)



**TABLE 3.2 DOCUMENTATION OF REMEDY IN PLACE (CERCLA)**

*This Table accompanies Figure 3.2, Documentation of Remedy in Place (CERCLA)*

TASK NUMBER	TASK NAME	LEAD	COORD./ CONCUR	TASK GUIDANCE AND INFORMATION
	<b>DOCUMENTATION OF REMEDY IN PLACE (CERCLA) (FOR EACH SITE/OU)</b>			
3.2-0	Does site/OU RA require construction? <i>[If No, proceed to task 3.2-4]</i>	RPM/BEC		<input type="checkbox"/> A site may be a construction completion candidate even when no physical construction is required or a long operation phase follows physical construction. <input type="checkbox"/> If no construction is required, proceed to task 3.2-4.
	<b>Remedial Action Construction (RA-C)</b>			<i>See Table 3.1</i>
3.2-1	Complete construction at site/OU	RPM/BEC		<input type="checkbox"/> If construction is completed at the last site/OU, construction is also completed at the installation.
3.2-2	Conduct final inspection(s) of RA construction	RPM/BEC	EPA/state RPM	<input type="checkbox"/> A pre-final inspection should be conducted at the site/OU. Construction completion criteria are satisfied when only minor "punch list" items are identified in the inspection to finish the work in accordance with design plans and specifications. A final inspection may be required before final acceptance. <input type="checkbox"/> An inspection involving the RPM/BEC, the EPA RPM, the RA contractor, and other agencies with a jurisdictional interest (i.e., the state) is generally required. The purpose of this inspection is to determine if all aspects of the plans and specifications have been implemented according to applicable enforcement documents.
3.2-3	Conduct shakedown of RA	RPM/BEC		<input type="checkbox"/> The shakedown period enables minor modifications in the remedy to ensure the remedy is operating as designed.
3.2-4	Does site/OU RA require remedial action operation (RA-O)? <i>[If No, proceed to task 3.4]</i>	RPM/BEC		<input type="checkbox"/> <i>See Section 2 for examples of remedy scenarios and the applicability of the RA-O phase to various types of remedial actions.</i>
3.2-5	Prepare final remedial action operation plan (O&M plan, sampling & analysis plan [SAP])	RPM/BEC		<b>Community Involvement</b> <input type="checkbox"/> <i>For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.</i>
3.2-6	Prepare and submit interim RA completion report, depending on remedy	RPM/BEC		<input type="checkbox"/> An interim RA completion report is a general term used for an interim RA Report at an NPL installation or an equivalent decision document at a non-NPL installation. <input type="checkbox"/> For longer-term remedies (e.g., groundwater or surface water remedies or monitored natural attenuation), an interim RA completion report is prepared when the physical construction of the system is complete and the unit is operating as designed. The report is amended and completed when the cleanup standards specified in the ROD are achieved (see Section 3.4). <b>Community Involvement</b> <input type="checkbox"/> <i>For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.</i>

**TABLE 3.2 DOCUMENTATION OF REMEDY IN PLACE (CERCLA)**

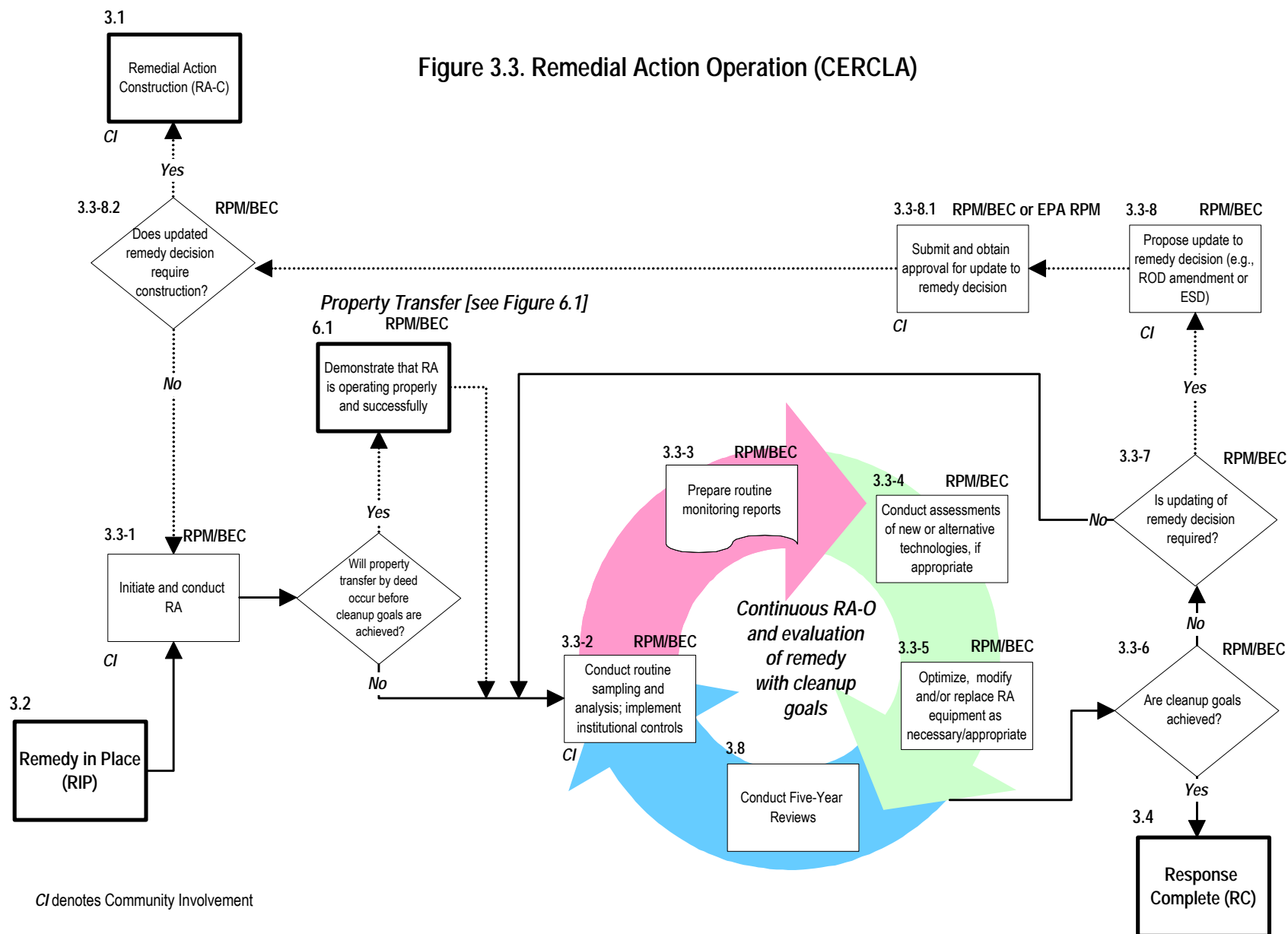
*This Table accompanies Figure 3.2, Documentation of Remedy in Place (CERCLA)*

TASK NUMBER	TASK NAME	LEAD	COORD./ CONCUR	TASK GUIDANCE AND INFORMATION
	Final remedy at NPL installation? <i>[If No, proceed to task 3.3]</i>			<input type="checkbox"/> If final remedy at an NPL installation, begin preparing a Preliminary Close Out Report (PCOR) for the installation.
3.2-7	Draft Preliminary Close Out Report (PCOR) and obtain EPA/state comments	RPM/BEC	EPA RPM	<input type="checkbox"/> The RPM/BEC will draft the Preliminary Close Out Report (PCOR) and provide it to the EPA RPM for review/action. <input type="checkbox"/> A PCOR demonstrates and documents that physical construction at an installation has been completed. The PCOR must contain a schedule for the installation to satisfy the NCP and other procedural requirements necessary to issue a Final Close Out Report. <input type="checkbox"/> The PCOR can be prepared before the RA Report for the final site/OU is complete and the remedy has been determined to be functioning properly. <input type="checkbox"/> The EPA RPM sends the PCOR to EPA Headquarters for comments.
3.2-8	Revise Preliminary COR; obtain signature/approval	RPM/BEC	EPA RPM	<input type="checkbox"/> After incorporating Headquarters' comments and obtaining the signature of the delegated regional official, a copy of the signed report is forwarded to EPA Headquarters. <input type="checkbox"/> Proceed to task 3.3

### 3.3 Remedial Action Operation (RA-O)

The process for Remedial Action Operation is graphically shown in Figure 3.3 with accompanying task guidance and information in Table 3.3.

Figure 3.3. Remedial Action Operation (CERCLA)



**TABLE 3.3 REMEDIAL ACTION OPERATION (CERCLA)**

*This Table accompanies Figure 3.3, Remedial Action Operation (CERCLA)*

TASK NUMBER	TASK NAME	LEAD	COORD./ CONCUR	TASK GUIDANCE AND INFORMATION
	<b>REMEDIAL ACTION OPERATION (CERCLA)</b>			
3.3-1	Initiate and conduct RA	RPM/BEC		<p><b>Community Involvement</b></p> <p><input type="checkbox"/> For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.</p>
	Will property transfer by deed occur before cleanup goals are achieved? <i>[If Yes, proceed to task 6.1]</i>	RPM/BEC		<p><input type="checkbox"/> Prior to property transfer where a remedial action is ongoing, an operating properly and successfully (OPS) demonstration must be made and approved.</p>
3.3-2	Conduct routine sampling and analysis; implement institutional controls	RPM/BEC		<p><input type="checkbox"/> All RA activities should be conducted in conformance with the remedy selected and set forth in the ROD and other decision documents for the site.</p> <p><b>Community Involvement</b></p> <p><input type="checkbox"/> For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.</p>
3.3-3	Prepare routine monitoring reports	RPM/BEC		<p><input type="checkbox"/> Evaluate performance of RA against cleanup goals.</p> <p><input type="checkbox"/> Submit the required progress reports to the appropriate regulatory agency.</p>
3.3-4	Conduct assessments of new or alternative technologies, if appropriate	RPM/BEC		<p><input type="checkbox"/> Comparison of the existing RA system against potential new alternatives will require detailed information about system performance.</p>
3.3-5	Optimize, modify, and/or replace RA equipment as necessary/appropriate	RPM/BEC		<p><input type="checkbox"/> Assess the need for upgrade or replacement of RA due to technological improvements, obsolescence, end of useful/expected life, or other factors. Consider associated costs, staffing, and related planning horizons.</p> <p><input type="checkbox"/> The ACC IRP Site Closure Guidance Manual includes detailed information on RA-O optimization.</p>
3.3-6	Are cleanup goals achieved? <i>[If Yes, proceed to task 3.4]</i>	RPM/BEC		<p><input type="checkbox"/> Achievement of cleanup goals may be an iterative process including sampling and analysis, modification of remedy equipment, and assessment of new technologies.</p>
3.3-7	Is updating of remedy decision required? <i>[If No, proceed to task 3.3-2]</i>	RPM/BEC		<p><input type="checkbox"/> Updating of the remedy decision may be required if the remedial action is not progressing toward attainment of cleanup goals for a substantial time.</p>
3.3-8	Propose update to remedy decision (e.g., ROD amendment or ESD)	RPM/BEC		<p><b>Community Involvement</b></p> <p><input type="checkbox"/> For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.</p>
3.3-8.1	Submit and obtain approval for update to remedy decision	RPM/BEC	EPA RPM	<p><input type="checkbox"/> Approval should be obtained before updated remedy decision is implemented.</p>

**TABLE 3.3 REMEDIAL ACTION OPERATION (CERCLA)**

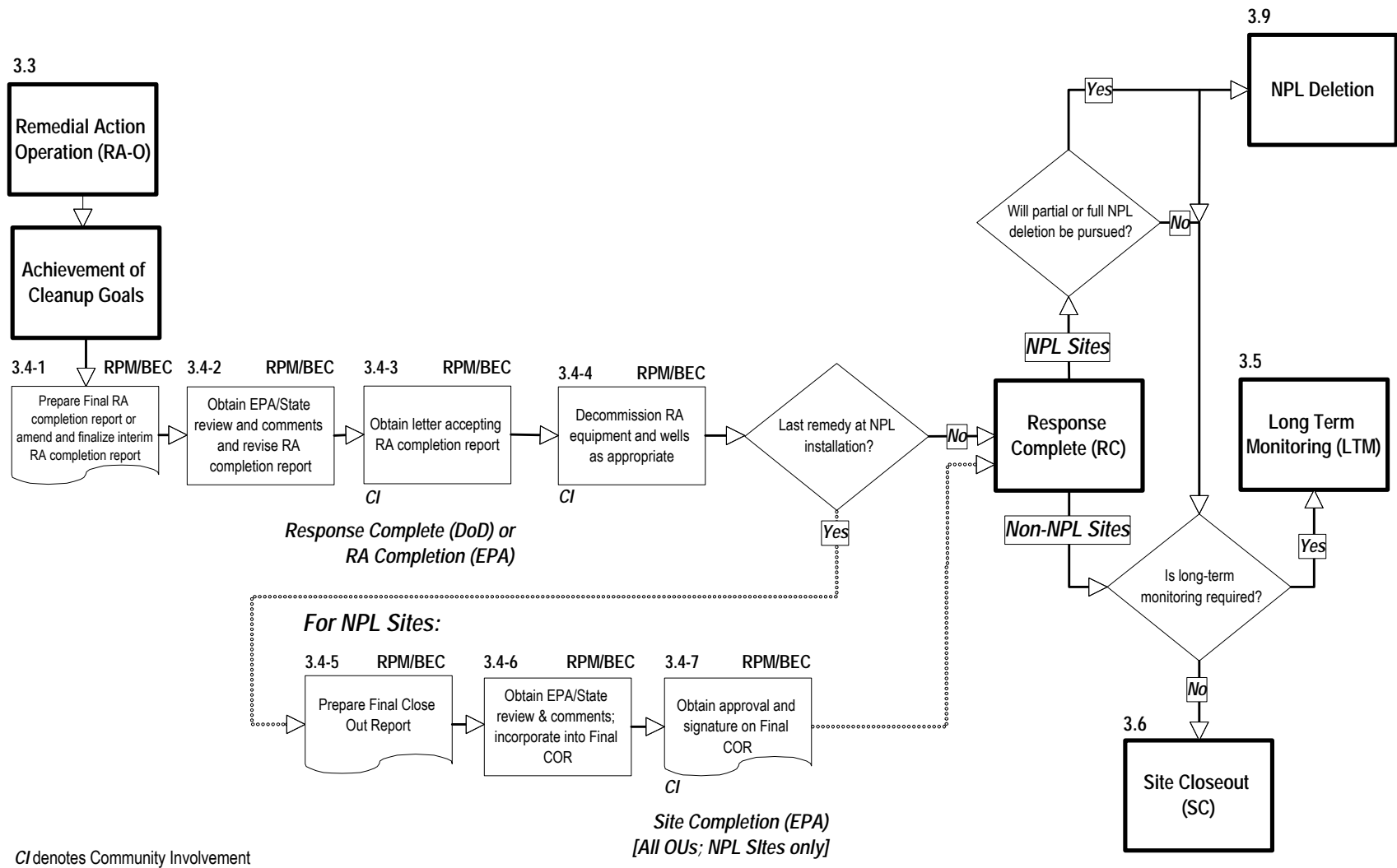
*This Table accompanies Figure 3.3, Remedial Action Operation (CERCLA)*

TASK NUMBER	TASK NAME	LEAD	COORD./ CONCUR	TASK GUIDANCE AND INFORMATION
3.3-8.2	Does updated remedy decision require construction? <i>[If Yes, proceed to task 3.1]</i> <i>[If No, proceed to task 3.3-1]</i>	RPM/BEC		<input type="checkbox"/> An updated remedy decision may not require construction; e.g., replacement of a pump-and-treat system for groundwater with monitored natural attenuation.

### 3.4 Documentation of Response Complete

The process for Documentation of Response Complete is graphically shown in Figure 3.4 with accompanying task guidance and information in Table 3.4.

Figure 3.4. Documentation of Response Complete (CERCLA)



**TABLE 3.4 DOCUMENTATION OF RESPONSE COMPLETE (CERCLA)**

*This Table accompanies Figure 3.4, Documentation of Response Complete (CERCLA)*

TASK NUMBER	TASK NAME	LEAD	COORD./ CONCUR	TASK GUIDANCE AND INFORMATION
	<b>DOCUMENTATION OF RESPONSE COMPLETE (CERCLA)</b>			
3-4.1	Prepare final RA completion report or amend and finalize interim RA completion report	RPM/BEC		<input type="checkbox"/> An RA completion report is a general term used for an RA Report at an NPL installation or an equivalent decision document at a non-NPL installation. <input type="checkbox"/> The final RA completion report documents the cleanup activities that took place at a single site/OU under remedial authority. In addition, it documents that the cleanup standards specified in the Record of Decision (ROD) have been met. <input type="checkbox"/> After signing and dating the RA Report, the RPM/BEC sends it to the EPA RPM for review and comments.
3-4.2	Obtain EPA/state review and comments and revise RA completion report	RPM/BEC	EPA RPM	<input type="checkbox"/> Revised RA completion report should incorporate EPA/State comments, as appropriate.
3-4.3	Obtain letter accepting RA completion report	RPM/BEC	EPA RPM	<input type="checkbox"/> Once the EPA RPM's comments are incorporated, the designated regional EPA official signs a letter accepting the final RA Report. <b>Community Involvement</b> <input type="checkbox"/> For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.
3-4.4	Decommission RA equipment and wells as appropriate	RPM/BEC		<b>Community Involvement</b> <input type="checkbox"/> For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.
	Last remedy at NPL installation? <i>[If Yes, proceed to task 3.4-5]</i>			<input type="checkbox"/> EPA guidance requires NPL installations to document achievement of Response Complete at all sites/OU's (EPA's Site Completion milestone). <input type="checkbox"/> Non-NPL installations may also prepare an analogous document to record achievement of cleanup goals for all remedies at the installation.
	<b>Response Complete (RC)</b>			<input type="checkbox"/> <b>NPL Installations:</b> Will partial or full NPL deletion be pursued? <i>[If Yes, proceed to task 3.9, Partial/Full NPL Deletion]</i> <input type="checkbox"/> <b>Non-NPL Installations:</b> Is long-term monitoring required? <i>[If Yes, proceed to task 3.5, Long-Term Monitoring; if No, proceed to task 3.6, Site Closeout]</i>



**TABLE 3.4 DOCUMENTATION OF RESPONSE COMPLETE (CERCLA)**

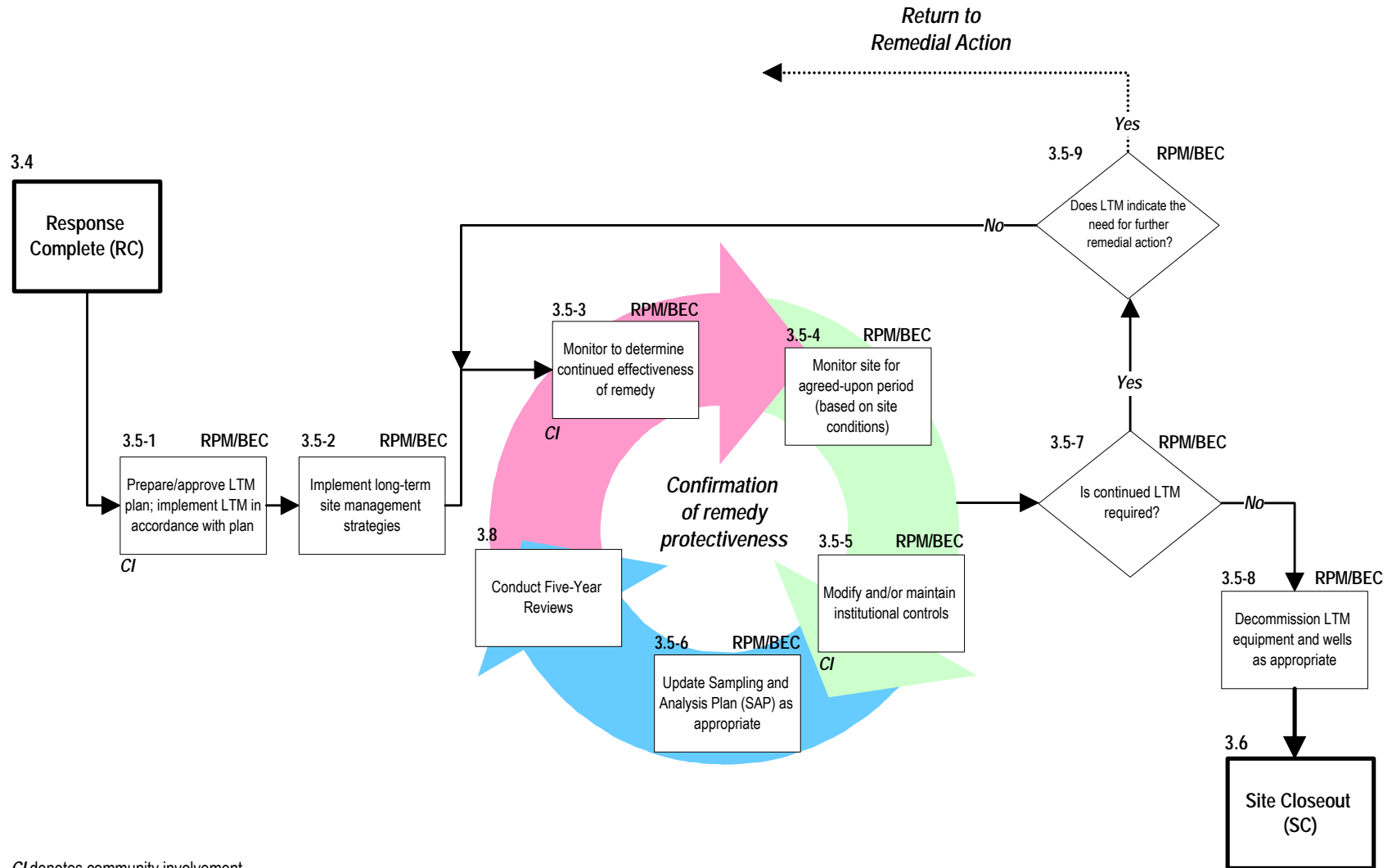
*This Table accompanies Figure 3.4, Documentation of Response Complete (CERCLA)*

TASK NUMBER	TASK NAME	LEAD	COORD./ CONCUR	TASK GUIDANCE AND INFORMATION
3-4.5	Prepare Final Close Out Report	RPM/BEC		<input type="checkbox"/> An installation must meet all four criteria below to be eligible for Response Complete (EPA's Site Completion): <ul style="list-style-type: none"> <li>• Cleanup levels specified in the RODs are met, and all cleanup actions and other measures identified in the RODs are successfully implemented;</li> <li>• The constructed remedies are operational and performing according to engineering design specifications;</li> <li>• The installation is protective of human health and the environment; and</li> <li>• The only remaining activities, if any, at the installation are long-term monitoring.</li> </ul> <input type="checkbox"/> The RPM/BEC may draft the Final COR and provide it to the EPA RPM for review/action. <input type="checkbox"/> The Final COR covers the entire installation. A Remedial Action (RA) Report for each operable unit, including the final, is required to document that the work was performed according to design specifications. A Final RA Report, however, cannot document Site Completion (Response Complete) for an installation. Only the Final COR, and in some cases a No Action ROD, satisfies completion requirements.
3-4.6	Obtain EPA/state review and comments; incorporate into Final COR	RPM/BEC	EPA/state RPM	<input type="checkbox"/> EPA Headquarters and the state should have an opportunity to review and comment on the report prior to final approval. <input type="checkbox"/> The EPA RPM sends the FCOR to EPA Headquarters for comments.
3-4.7	Obtain approval and signature on Final COR	RPM/BEC	EPA RPM	<input type="checkbox"/> EPA Headquarters has Regional Coordinators assigned to act as primary reviewers of the Final COR. These individuals will work closely with the EPA RPM in performing completion activities and will review the Final COR. A copy of the approved Final COR should be sent to EPA Headquarters following signature by the appropriate Regional official. <input type="checkbox"/> File the Final COR in the Administrative Record. <p><b>Community Involvement</b></p> <input type="checkbox"/> <i>For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.</i>

## 3.5 Long-Term Monitoring

The process for Long-Term Monitoring is graphically shown in Figure 3.5 with accompanying task guidance and information in Table 3.5.

Figure 3.5. Long-Term Monitoring (CERCLA)



**TABLE 3.5 LONG-TERM MONITORING (CERCLA)**

*This Table accompanies Figure 3.5, Long-Term Monitoring (CERCLA)*

TASK NUMBER	TASK NAME	LEAD	COORD./ CONCUR	TASK GUIDANCE AND INFORMATION
	<b>LONG-TERM MONITORING (CERCLA)</b>			
3.5-1	Prepare/approve LTM plan; implement LTM in accordance with plan	RPM/BEC		<b>Community Involvement</b> <input type="checkbox"/> For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.
3.5-2	Implement long-term site management strategies	RPM/BEC		<input type="checkbox"/> At this point it may be appropriate to consider an alternative site management strategy that is better aligned with the requirements of the LTM phase.
3.5-3	Monitor to determine continued effectiveness of remedy	RPM/BEC		<b>Community Involvement</b> <input type="checkbox"/> For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.
3.5-4	Monitor site for agreed-upon period (based on site conditions)	RPM/BEC		<input type="checkbox"/> The period for monitoring may be indefinite, depending on the remedy and site conditions.
3.5-5	Modify and/or maintain institutional controls	RPM/BEC		<input type="checkbox"/> At this point, adjustments may be made to previously established institutional controls. For example, restrictions related to protection of the RA-O equipment may be lifted when the equipment has been removed, and use restrictions necessitated by pre-cleanup contaminant levels may be lifted.  <b>Community Involvement</b> <input type="checkbox"/> For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.
3.5-6	Update Sampling and Analysis Plan (SAP) as appropriate	RPM/BEC		<input type="checkbox"/> The SAP may include the Quality Assurance Project Plan (QAPP), health and safety plan, and other related plans. <input type="checkbox"/> In particular, the SAP should be revisited in light of potentially changing data quality objectives and the possibility of significantly altered sampling and analysis protocols as the site moves into the LTM phase.
3.5-7	Is continued LTM required?  [If Yes, proceed to task 3.5-9]	RPM/BEC		<input type="checkbox"/> LTM may be discontinued if site conditions become conducive to unrestricted use and unlimited exposure. <input type="checkbox"/> To ensure optimum efficiency of an existing LTM program, the LTM optimization process should be reviewed and updated periodically.
3.5-8	Decommission LTM equipment and wells as appropriate	RPM/BEC		<input type="checkbox"/> Proceed to task 3.6, Site Closeout
3.5-9	Does LTM indicate the need for further remedial action? [If No, proceed to task 3.5-3] [If Yes, return to task 3.3]	RPM/BEC		<input type="checkbox"/> Further remedial action may be required where LTM shows an increased level of contamination at a site.

## 3.6 Site Closeout

Task guidance and information for Site Closeout is shown in Table 3.6.

TABLE 3.6 SITE CLOSEOUT (CERCLA)

TASK NUMBER	TASK NAME	LEAD	COORD./ CONCUR	TASK GUIDANCE AND INFORMATION
	<b>SITE CLOSEOUT (CERCLA)</b>			
3.6-1	Terminate active management of site	RPM/BEC		<b>Community Involvement</b> <input type="checkbox"/> For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.
3.6-2	Initiate long-term installation-management transition, as appropriate	Installation Manager		<input type="checkbox"/> Since the Site Closeout milestone represents the termination of active site management by the DoD, the appropriate DoD Component Installation Manager (e.g., Installation Commander or Civil Engineer) should phase out associated management strategies, including transition of affected personnel and functions. <b>Community Involvement</b> <input type="checkbox"/> For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.

## 3.7 Installation Completion

Task guidance and information for Installation Completion is shown in Table 3.7.

TABLE 3.7 INSTALLATION COMPLETION (CERCLA)

TASK NUMBER	TASK NAME	LEAD	COORD./ CONCUR	TASK GUIDANCE AND INFORMATION
	<b>INSTALLATION COMPLETION (CERCLA)</b>			
3.7-1	Close out Federal Facilities Agreement [NPL only]	RPM/BEC		<b>Community Involvement</b> <input type="checkbox"/> For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.
3.7-2	Complete long-term installation management strategies	Installation Manager		<input type="checkbox"/> Complete transition of installation personnel and functions <b>Community Involvement</b> <input type="checkbox"/> For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.

### 3.8 Five-Year Review(s)

---

Section 121(c) of CERCLA, as amended, provides that:

*“If the [lead agency] selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the [lead agency] shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected...”*

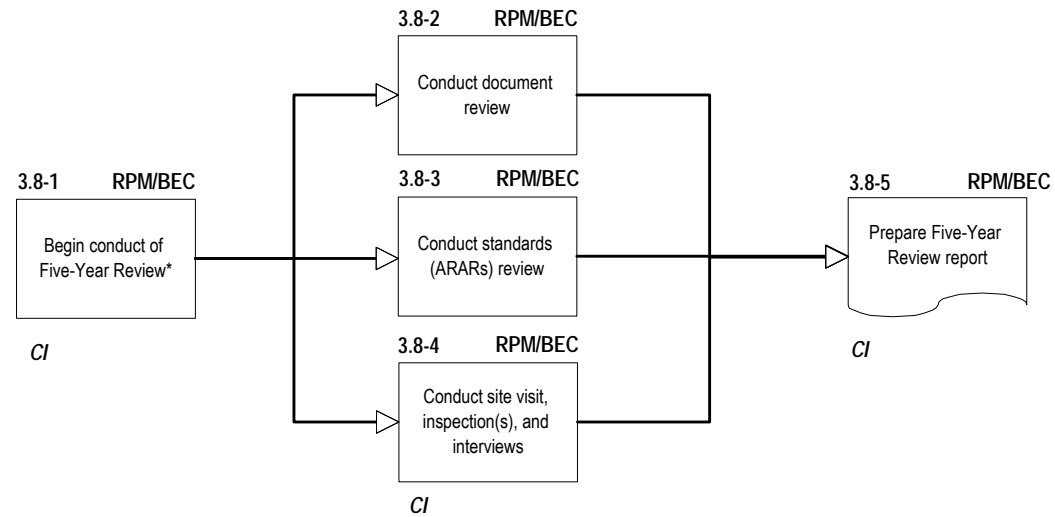
Five-Year Reviews are intended to evaluate whether the response action remains protective of public health and the environment, is functioning as designed, and necessary operation and maintenance is being performed. **The lead agency conducts statutory Five-Year Reviews of any site at which a post-SARA (after October 1986) remedy, upon attainment of cleanup levels specified in the ROD, will not allow for unlimited use and unrestricted exposure.** The review is required to occur no less often than every five years after initiation of the selected remedial action. While Five-Year Reviews are not a statutory requirement at all sites, they should be completed as a matter of EPA policy to be consistent with the NCP. These “policy Five-Year Reviews” are conducted at pre-SARA sites and sites where the ROD specifies a response that will require at least five years to achieve cleanup to levels allowing unlimited use and unrestricted exposure. At installations operating under the RCRA regulatory framework, analogous steps under RCRA (see Table 4.0-1) can fulfill the functional requirements of Five-Year Reviews.

The focus of the Five-Year Review will depend on the original goal of the response action. If protectiveness is being ensured through exposure protection (e.g., containment with a cap) and implementation of institutional controls, the review should focus on whether the cap remains effective and the institutional controls remain in place. For a long-term remedy (i.e., an ongoing remedial action that has not yet achieved the cleanup standards set in the ROD), the focus of the review should be on both the effectiveness of the technology and on the specific performance levels established in the ROD (e.g., performance of an extraction and treatment system for groundwater). Five-Year Reviews generally include document reviews, reviews of cleanup standards, interviews, inspections, technology reviews, and preparation of a report summarizing the findings and recommendations. Statutory Five-Year Reviews require a written determination by EPA that the remedy remains protective.

**The initiation of Five-Year Reviews is triggered by the start (defined as on-site construction at the applicable OU) of the first remedial action that requires such a review.** Once begun, Five-Year Reviews may be discontinued only if levels of contaminants allow for unrestricted use and unlimited exposure, and appropriate documentation and notification is given. This criterion can potentially result in an indefinite requirement for conducting Five-Year Reviews (e.g., applicable landfill caps). The restoration project team should consider these requirements carefully when reaching remedial decisions and planning for future requirements.

EPA’s guidance for Five-Year Reviews continues to evolve and is currently undergoing revision. Current EPA guidance/directives on Five-Year Reviews are cited in Section 9. Restoration project team members are advised to keep abreast of emerging new guidance on this subject, and to confer regularly regarding strategies and expectations for conduct of Five-Year Reviews at specific installations. In particular, restoration team members should look for opportunities for optimization and efficiency in the conduct of Five-Year Reviews and other documentation with similar content.

Figure 3.8. Five-Year Review(s) (CERCLA)



*CI* denotes Community Involvement

\*Triggered by first RA-C start requiring such a review

**TABLE 3.8 FIVE-YEAR REVIEW(S) (CERCLA)**

*This Table accompanies Figure 3.8, Five-Year Review(s) (CERCLA)*

TASK NUMBER	TASK NAME	LEAD	COORD./ CONCUR	TASK GUIDANCE AND INFORMATION
	<b>FIVE-YEAR REVIEW(S) (CERCLA)</b>			
3.8-1	Begin conduct of Five-Year Review  Triggered by first RA-C start requiring such a review	RPM/BEC	EPA RPM	<input type="checkbox"/> Statutory reviews should be completed within five years of the initiation of the first remedial action (or operable unit) at a site/OU. <input type="checkbox"/> Sites subject to Five-Year Reviews with multiple remedies or operable units should conduct a Five-Year Review for the entire site/OU, and not separate Five-Year Reviews for each remedy or operable unit. <input type="checkbox"/> Performance reporting requirements under RCRA fulfill the functional requirements for Five-Year Reviews. <input type="checkbox"/> Five-Year Reviews may be terminated when no hazardous substances, pollutants, or contaminants remain at the installation above levels that allow for unrestricted use and unlimited exposure. <b>Community Involvement</b> <i>Required</i> <input type="checkbox"/> The public will be informed of the determination that a Five-Year Review is appropriate, the planned scope of the review, the location of the report on the review, on-site review activities, actions taken based on the review, and the location of the Administrative Record file for the installation.
3.8-2	Conduct document review	RPM/BEC	EPA RPM	<input type="checkbox"/> Document review for a Five-Year Review at an active installation is designed to acquaint the reviewer with the ongoing remedial action and should be less extensive than for a completed installation.
3.8-3	Conduct standards (ARARs) review	RPM/BEC	EPA RPM	<input type="checkbox"/> Standards review in a Five-Year Review context means the review of ARARs, and of risk considerations. For an ongoing remedial action, it is not necessary to review ARARs, nor in most circumstances to recalculate the risk or perform a new risk assessment. <input type="checkbox"/> When changes in ARARs necessitate further action, the DoD may at any time implement such action through an Explanation of Significant Differences (ESD), ROD amendment, amendment to a consent decree or order, or other enforceable document, as appropriate.
3.8-4	Conduct site/OU visit, inspection(s), and interviews	RPM/BEC	EPA RPM	<input type="checkbox"/> A site/OU visit is normally an integral part of a Five-Year Review. However, special site visits at installations where remedial action is ongoing are unnecessary, since visual inspection is ongoing at such sites. <input type="checkbox"/> Current conditions at the installation may be summarized based on other regular visits to the installation. <b>Community Involvement</b> <input type="checkbox"/> <i>For a list of activities you may want to consider, refer to Section 7.0, Community Involvement.</i>
3.8-5	Prepare Five-Year Review report	RPM/BEC	EPA RPM	<input type="checkbox"/> The Five-Year Report should contain an introduction; a discussion of remedial objectives; areas of noncompliance with those objectives; recommendations; a statement on whether the remedy remains protective; and notice of the next Five-Year Review, if applicable. <b>Community Involvement</b> <i>Required</i> <input type="checkbox"/> Add the Five-Year Review report to the Administrative Record.

### 3.9 Partial/Full NPL Deletion

---

The NPL deletion process begins at most installations once the RC milestone has been achieved, i.e., once cleanup goals have been met for all sites/OU's at the installation. Therefore, deletion can occur while LTM is being performed. Site deletion requirements ensure that: 1) the documentation of activities and decision making at the installation is complete, 2) the activities conducted and documented are verified, and 3) the state and public have an opportunity for notice and comment before an installation is formally deleted from the NPL.

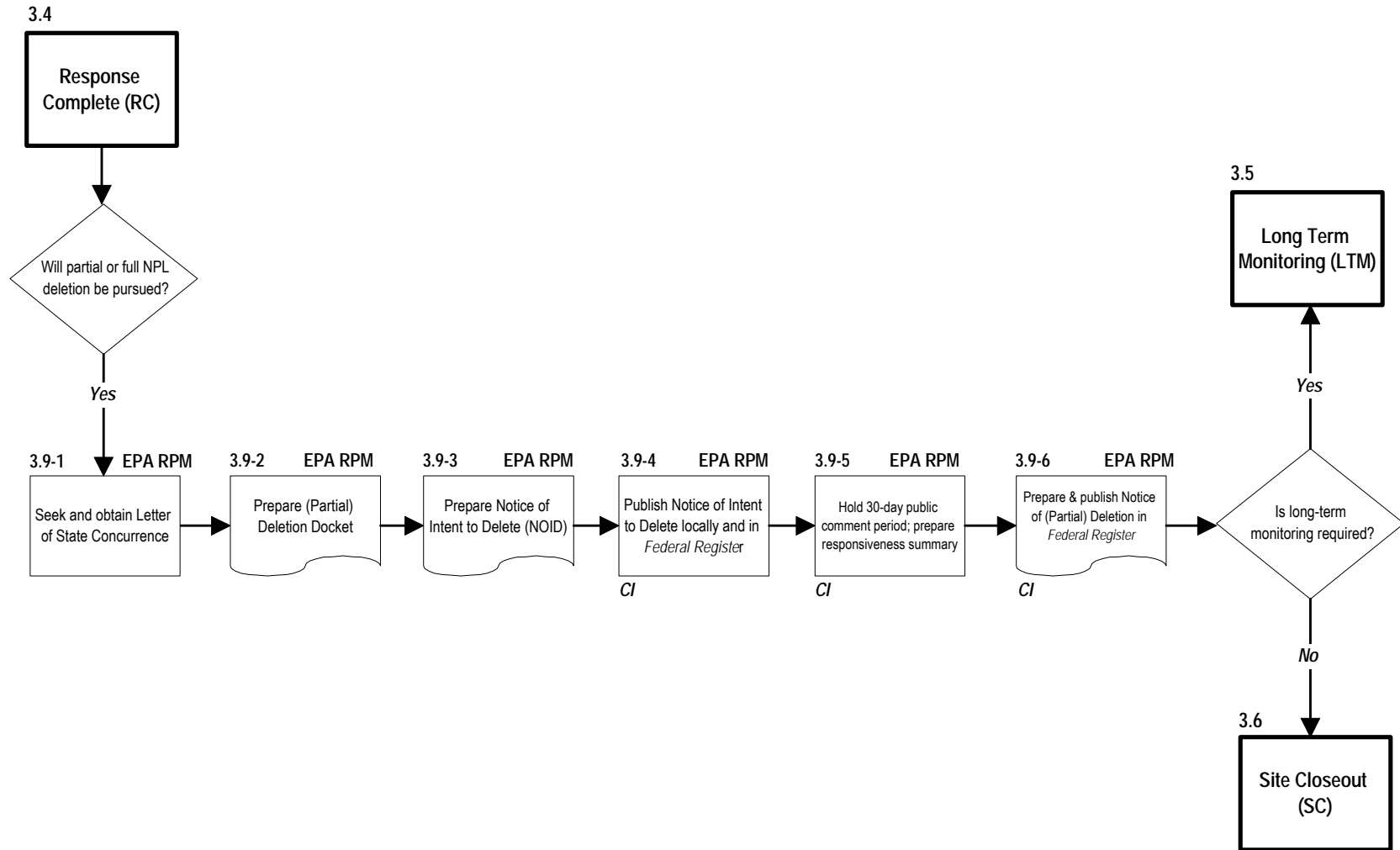
The deletion process is dictated by the NCP. To delete an installation from the NPL, EPA must determine, in consultation with the state, that one of the following criteria has been met:

- Responsible or other parties have implemented all response actions required, or
- The RI has shown that the release poses no significant threat to public health or the environment, and, therefore, it is not appropriate to take remedial measures.

Deletion of an entire installation does not acknowledge the completed cleanup of portions of the installation. Total installation cleanup may take many years, while portions of the installation may have been cleaned up and may be available for productive use. Some potential investors or developers may be reluctant to undertake economic activity at even a cleaned-up portion of real property that is part of an installation listed on the NPL. Therefore, EPA will consider petitions for "partial deletions" where the requirements for deletion noted above have been met for the particular parcel of property to be transferred.



Figure 3.9. Partial/Full NPL Deletion (CERCLA)



CI denotes Community Involvement

**TABLE 3.9 PARTIAL/FULL NPL DELETION (CERCLA)**

*This Table accompanies Figure 3.9, Partial/Full NPL Deletion*

TASK NUMBER	TASK NAME	LEAD	COORD./ CONCUR	TASK GUIDANCE AND INFORMATION
	<b>PARTIAL/FULL NPL DELETION</b>			
	Will partial or full NPL deletion be pursued?	RPM/BEC		<input type="checkbox"/> The RPM/BEC must decide whether to seek partial deletion of the NPL installation or defer deletion until the entire installation can be deleted.
3.9-1	Seek and obtain Letter of state Concurrence	EPA RPM	RPM/BEC	<input type="checkbox"/> EPA must consult with the state before making a determination that a site or installation warrants deletion from the NPL.
3.9-2	Prepare (Partial or Full) Deletion Docket	EPA RPM		<input type="checkbox"/> The EPA Region prepares a deletion docket containing all pertinent information supporting the deletion recommendation. <input type="checkbox"/> The deletion docket is not a continuation of the Administrative Record for the site. Documents in the Administrative Record can be referenced and do not have to be duplicated in the deletion docket (provided the Administrative Record is still available to the public). <input type="checkbox"/> The documents contained in the deletion docket will vary depending on the type of response (e.g., remedial action, removal action, no action) and the lead agency (i.e., DoD Component).
3.9-3	Prepare Notice of Intent to Delete (NOID)	EPA RPM		
3.9-4	Publish Notice of Intent to Delete locally and in <i>Federal Register</i>	EPA RPM		<b>Community Involvement</b> <i>Required</i> <input type="checkbox"/> The EPA Region prepares and publishes the NOID in accordance with the Federal Register publication requirements. Headquarters staff can help review these notices to ensure national consistency and completeness.
3.9-5	Hold 30-day public comment period; prepare responsiveness summary	EPA RPM		<b>Community Involvement</b> <i>Required</i> <input type="checkbox"/> A minimum of 30-day comment period is required for NPL deletions. The 30-day period begins on the date of publication of the Notice of Intent to Delete.
3.9-6	Prepare and publish Notice of (Partial or Full) Deletion in <i>Federal Register</i>	EPA RPM		<input type="checkbox"/> The EPA Region then will publish the Notice of Deletion in the Federal Register. This notice states that all appropriate responses under CERCLA have been implemented and that no further response is appropriate. The Notice of Deletion includes an effective date, a Regional contact, and supplemental site/OU information. All NPL rulemakings after publication of this notice will reflect the deletion. <b>Community Involvement</b>
	Is long-term monitoring required?  <i>[If Yes, proceed to task 3.5]</i> <i>[If No, proceed to task 3.6]</i>			<input type="checkbox"/> Long-term monitoring will typically be required where waste is left in place, to ensure protectiveness of public health and the environment.

### 3.10 Remedial/Removal Action Integration

---

The integration of remedial and removal response actions is an installation-specific strategy upon which the restoration project team needs to agree. More formal closeout of removal actions (with regulatory coordination/concurrence) may be needed in certain frameworks (e.g., under FFAs or IAGs), while a more-informal “removal closeout report” (with format and content agreed to by the project team) may be acceptable in other cases. For sites where a removal action is the final remedial activity to be taken, a more formal decision document generally should be prepared to close out the site (e.g., a No-Action ROD if appropriate). In all cases, the team should decide on a consistent mechanism for documenting the decision that no further action is needed for a site. For example, the Air Force’s *No Further Response Action Planned (NFRAP) Guide* (June 1995) and EPA OSWER Directive 9200.1-23P, “Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents” (July 1999), provide a framework and guidance on how to document removal actions. The FFA or similar agreement(s) may also provide the necessary framework.

